

AMENDMENTS TO THE CLAIMS

1-8. (Cancelled).

9. (Currently Amended) A base station controller system comprising:

a plurality of resource pools, each said resource pool comprising resources supporting at least one call processing function; and

a system controller to allocate selected combinations of specific resources from one or more of said plurality of resource pools to provide desired call processing for respective ones of calls to and from a plurality of wireless access terminals;

said base station controller organized as:

a hub subrack comprising a central switching resource and said system controller; and
at least one processing subrack to carry said plurality of resource pools, each said at least one processing subrack comprising resources from each of said plurality of resource pools[,.] and ~~further comprising~~ switching resources to communicatively couple said processing subrack to said hub subrack;

said switching resources on each said processing subrack and said central switching resource on said hub subrack together comprising a switching fabric to communicatively couple said hub subrack with each of said at least one processing subrack, said switching fabric comprising:

a communication switch on said hub subrack;

a communication switch on each said at least one processing subrack; and

a plurality of communication links between said communication switches on said at least one processing subrack and said communication switch on said hub subrack.

10-11. (Cancelled).

12. (Currently Amended) The base station controller system of claim ~~44~~ 9 wherein said communication links between each said processing subrack and said hub subrack comprise redundant first and second communication links.

13. (Original) The base station controller system of claim 12 wherein each said communication switch on said hub subrack and each said processing subrack comprises redundant primary and secondary communication switches for switching said first and second communication links, respectively.

14. (Original) The base station controller system of claim 13 wherein said switching fabric comprises a primary switching fabric and a redundant secondary switching fabric, said primary switching fabric comprising said first communication links and said first communication switches, and said secondary switching fabric comprising said second communication links and said second communication switches.

15. (Currently Amended) The base station controller system of claim ~~44~~ 9 wherein said communication switches on said hub subrack and each said processing subrack comprise one of a set of ATM switches, Ethernet switches, or Internet Protocol (IP) switches.

16. (Currently Amended) The base station controller system of claim 9 wherein each said ~~mixed-architecture~~ processing subrack comprises a percentage of an overall call processing capacity of said base station controller system, and further wherein the overall call processing capacity of said base station controller system may be scaled based on adding additional ~~ones~~ of said processing subracks.

17. (Currently Amended) The base station controller system of claim 9 wherein said system controller comprises at least one general processing board operative to configure said central switching resource on said hub subrack and said switching resources on ~~at least one of said~~ one or more processing subracks to select combinations of specific resources from one or more of said plurality of resource pools for each call routed through said base station controller.

18. (Currently Amended) The base station controller system of claim 17 wherein said system controller comprises a processing subsystem configured to optimize resource selections such that resource assignments comprising said selected combinations of resources from said one or more of said plurality of resource pools are selected from a minimum number of said processing ~~sub-racks~~ subracks.

19. (Original) The base station controller system of claim 9 wherein said plurality of resource pools comprise:

front haul exchange termination resources to provide a plurality of front haul communication links with an associated mobile switching center, each said front haul communication link carrying call traffic for at least one call between said base station controller system and the associated mobile switching center;

back haul exchange termination resources to provide a plurality of back haul communication links with at least one radio base station, each said back haul communication link carrying call traffic for at least one call between said base station controller system and at least one radio base station in wireless communication with at least one wireless access terminal involved in said at least one call;

selector element resources to provide radio link management for calls being routed through said base station controller; and

service option element resources to provide selected signal processing functions, including voice coding and decoding and echo cancellation functions for calls being routed through said base station controller.

20. (Original) The base station controller system of claim 9 wherein said resource pools further comprise packet core network exchange termination resources to route packet data calls to and from one or more of the plurality of wireless access terminals to an external packet data network.

21. (Currently Amended) A method of structuring a base station controller system wherein call processing for each call being routed through the base station controller comprises performing a plurality of call processing functions, the method comprising:

providing a plurality of resource pools, each one of said resource pools providing one of the plurality of call processing functions;

providing redundant and independent access to each said resource pool by interconnecting said plurality of resource pools through a configurable switching fabric; and

allocating a specific combination of resources selected from one or more resource pools in said plurality of resource pools to each call being routed through said base station controller by configuring said switching fabric;

organizing the base station controller system as a rack system comprising:

a hub subrack providing centralized switching resources; and

one or more processing subracks, each of said one or more processing subracks

carrying at least a portion of the resources from each of said plurality of resource pools and rack switching resources to interface with said hub subrack; and

optimizing resource assignments for a given call being routed through the base station

controller system by assigning specific resources from one or more resource pools in

said plurality of resource pools to minimize the number of said one or more processing

subracks used to support the given call.

22. (Cancelled).

23. (Currently Amended) The method of claim ~~22~~ 21 further comprising increasing a call processing capacity of the base station controller system based on adding additional ~~ones of~~ said processing subracks as needed.

24. (Cancelled).